

**§ 175.702**

**49 CFR Ch. I (10–1–02 Edition)**

**§ 175.702 Requirements for carriage of packages containing Class 7 (radioactive) materials in a cargo aircraft only.**

(a) As used in this section, the term “group of packages” means packages that are separated from each other in an aircraft by a distance of 6 m (20 feet) or less.

(b) No person may carry in a cargo aircraft only any package required by §172.403 of this subchapter to be labeled Radioactive Yellow-II or Radioactive Yellow-III unless:

(1) The total transport index for all of the packages does not exceed 50.0 and the package is carried in accordance with §175.701(a); or

(2) The total transport index for all of the packages exceeds 50.0 and:

(i) The separation distance between the surfaces of the Class 7 (radioactive) materials packages, overpacks or freight containers and any space occupied by—

(A) Humans is at least 9 m (30 feet); and

(B) Live animals is at least 0.5 m (20 inches) for journeys not exceeding 24 hours and at least 1.0 m (39 inches) for journeys longer than 24 hours;

(ii) The transport index for any group of packages does not exceed 50.0; and

(iii) Each group of packages is separated from every other group in the aircraft by not less than 6 m (20 feet), measured from the outer surface of each group; and

(iv) The total transport index for all packages containing fissile Class 7 (radioactive) materials does not exceed 50.0.

[Amdt. 175–13, 45 FR 20102, Mar. 27, 1980, as amended by Amdt. 175–29, 48 FR 50461, Nov. 1, 1983; Amdt. 175–47, 55 FR 52687, Dec. 21, 1990; Amdt. 175–49, 58 FR 50494, Sept. 27, 1993; 66 FR 45383, Aug. 28, 2001]

**§ 175.703 Other special requirements for the acceptance and carriage of packages containing Class 7 (radioactive) materials.**

(a) No person may carry in an aircraft any package of Class 7 (radioactive) materials required by §172.403 of this subchapter to be labeled Radioactive Yellow-II or Radioactive Yellow-III closer than the distances shown in the following table to any package marked as containing undeveloped film:

Transport index	Minimum separation distance to nearest undeveloped film for various times of transit									
	Up to 2 hours		2 to 4 hours		4 to 8 hours		8 to 12 hours		Over 12 hours	
	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0.1 to 1.0 .....	0.3	1	0.6	2	0.9	3	1.2	4	1.5	5
1.1 to 5.0 .....	0.9	3	1.2	4	1.8	6	2.4	8	3.3	11
5.1 to 10.0 .....	1.2	4	1.8	6	2.7	9	3.3	11	4.5	15
10.1 to 20.0 .....	1.5	5	2.4	8	3.6	12	4.8	16	6.6	22
20.1 to 30.0 .....	2.1	7	3.0	10	4.5	15	6.0	20	8.7	29
30.1 to 40.0 .....	2.4	8	3.3	11	5.1	17	6.6	22	9.9	33
40.1 to 50.0 .....	2.7	9	3.6	12	5.7	19	7.2	24	10.8	36

(b) No person may accept for carriage in an aircraft packages of Class 7 (radioactive) materials, other than limited quantities, contained in a rigid or non-rigid overpack, including a fiber-board box or plastic bag, unless they have been prepared for shipment in accordance with §173.448(g) of this subchapter.

(c) No person shall carry in an aircraft a fissile material controlled shipment (as defined in §173.403 of this subchapter), except—

(1) In a cargo aircraft only which has been assigned for the exclusive use of

the shipper for the specific shipment of fissile Class 7 (radioactive) material. Instructions for the exclusive use must be developed by the shipper and carrier, and the instructions issued with the shipping papers; or

(2) In an aircraft in which there are no other packages required to bear a radioactive label as prescribed in §172.403 of this subchapter. Specific arrangements must be made between the shipper and carrier, with instructions to that effect issued with the shipping papers.

(d) No person shall offer or accept for transportation, or transport, by air—

(1) Vented Type B(M) packages, packages which require external cooling by an ancillary cooling system or packages subject to operational controls during transport; or

(2) Liquid pyrophoric Class 7 (radioactive) materials.

(e) Packages with radiation levels at the package surface or a transport index in excess of the limits specified in §173.441(a) of this subchapter may not be transported by aircraft except under special arrangements approved by RSPA.

[Amdt. 175-13, 45 FR 20102, Mar. 27, 1980, as amended by Amdt. 175-26, 48 FR 10245, Mar. 10, 1983; Amdt. 175-26, 48 FR 31220, July 7, 1983; Amdt. 175-29, 48 FR 50461, Nov. 1, 1983; Amdt. 175-47, 55 FR 52687, Dec. 21, 1990; Amdt. 175-53, 60 FR 50333, Sept. 28, 1995]

#### § 175.704 Plutonium shipments.

Shipments of plutonium by air which are subject to 10 CFR 71.88(a)(4) must comply with the following:

(a) A plutonium package weighing less than 40 kg (88 lbs) and having its height and diameter both less than 50 cm (19.7 in), must be stowed aboard the aircraft on the main deck or the lower cargo compartment in the aft-most location that is possible for cargo of its size and weight. No other type of cargo may be stowed aft of a plutonium package.

(b) A plutonium package must be secured and restrained to prevent shifting under normal transport. A plutonium package weighing 40 kg (88 lbs) or more must be securely cradled and tied down to the main deck of the aircraft such that the tied down system is capable of providing package restraint against the following inertial forces acting separately relative to the deck of the aircraft: Upward, 2g; Forward, 9g; Sideward, 1.5g; Downward, 4.5g.

(c) A plutonium package weighing less than 40 kg (88 lbs), and having its height and diameter both less than 50 cm (19.7 in), may not be transported aboard an aircraft carrying other cargo required to bear an "Explosive A" or an "Explosive 1.1" label. Any other plutonium package may not be transported aboard an aircraft carrying other cargo bearing any of the fol-

lowing hazardous material labels: Explosive A; Explosive B; Explosive C; Explosive 1.1, 1.2, 1.3, 1.4, 1.5 or 1.6; Spontaneously Combustible; Dangerous When Wet; Organic Peroxide; Non-Flammable Gas; Flammable Liquid; Flammable Solid; Flammable Gas; Oxidizer; or Corrosive.

[Amdt. 175-53, 60 FR 50333, Sept. 28, 1995]

#### § 175.705 Inspection of aircraft for contamination by Class 7 (radioactive) materials.

(a) Aircraft used routinely for the carriage of Class 7 (radioactive) materials shall be periodically checked for radioactive contamination. The frequency of checks shall be related to the likelihood of contamination and the extent to which Class 7 (radioactive) materials are carried.

(b) An aircraft must be taken out of service if the level of contamination exceeds that provided in §175.700(b).

[Amdt. 175-25, 47 FR 54824, Dec. 6, 1982, as amended by Amdt. 175-47, 55 FR 52687, Dec. 21, 1990]

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